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Studying the principles and foundations of virtual architecture and the age of information architecture

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Abstract---This research will study the principles and foundations of virtual architecture and the age of information architecture. The research methodology is descriptive-analytical, and library resources are used. Studies showed that architectural design is universal in many small and large worlds. Understanding these worlds and controlling and applying them is an issue that preoccupies the architect during the design process. Creating an architectural world does not take place unless the architect recognizes smaller worlds and understands the connections of these worlds to define a new set/world. Microworlds of architecture is expanding day by day. The variety of materials, technology, form, etc., provides a multitude of microcosms to architects. To control this variety, the architect needs instructions to define the relationships between worlds. These instructions prepare a situation for using a digital environment to design. The age of information, like the age before it, which was the age of industry, challenges our designs and how they are created. The creative and productive potentials of digital media have established new dimensions in architecture.

Keywords---*virtual architecture, age of information architecture, digital environment, cyberspace.*

Introduction

In fact, the fourth wave or virtual age, is the developed form of the age of information and knowledge, which will merge in the immediate future and make the three-dimensional space available to humans. The age of agriculture took place in order to supply and prepare food and lasted for almost 30,000 years. The age of industry was formed after it and solved the problem of required tools and of humans at that time, and it lasted for about 500 years and still exists in some countries. The third wave is related to the age of information, which is expanding and developing rapidly with the presence of introduced computers and progresses

and has strongly influenced the field of information and communication technology. The Internet is the most obvious symbol of this age. This age was merged in order to meet the human needs for information, which need has been partially satisfied by computers and the Internet along with information banks and worldwide web networks (WWW), and in the future, it will affect more by transferring one-dimensional space (text, e-mail and chat rooms) to two dimensions (film, image and simulated mannequins) which is the characteristic of this age. The lifetime of this age will be short and will not exceed just a few decades. The fourth wave is coming, and a three-dimensional world will be provided to the world soon and provides conditions so that human imagination can come closer to the truth and will introduce a new space that is much more developed and different compared to today's world. Today's information society should have an obvious vision to continue growing and progressing in dynamism. The virtual age can be the perspective of the long-term evolution of today's information society.

Information society monitors the principles which are accepted easily but measured more difficult than the others. We are aware of the significant increase of current information in society based on our routine life patterns. The available amount of information is obviously greater than at any time compared to the past. In England, television has been widely used since the mid-1950s, but today broadcasting television programs have become a twenty-four-hour phenomenon. Broadcasting programs have increased from one channel to five channels in this country and now include video, cable TV, satellite channels and even computer information services. The connection of computers to the Internet and the appearance of hand-help computers are witnesses of this huge development.

We have gradually seen the decrease of the industrial age since the second half of the 20th century. Although the end of the life of the industrial age did not take place based on a contract and under specific conditions and agreement, and it is a theoretical and comparative issue from a realistic point of view, the catenoid conditions and events which took place during several decades led to the end of this age's life. Accelerated scientific-technological developments were proposed as the motor engine of new transformation, and human growth and development in the industrial age supplied the necessary ability to enter into the information age. The early years of the 1970s in the West were alongside the beginning of many movements to create transformation in the field of information and informing. In the early years of the 1980s, the tendency to use small computers in offices and then in homes increased, and so many current jobs were affected by this change (Eftekhari, 2004).

After 1990, the evolutions in the development of sharing information became faster by emerging and developing computer networks, and evolution took place for the world, which was more than expectations by forming the World Wide Web. At this time, the economic, informative, educational, etc., activities and processes changed by using established platforms so that people can provide or supply their services in global dimensions. At the beginning of the third millennium, a new development took place by using and merging the Internet and information systems, and that was web-based systems, which allowed them to do unattended work while increasing work efficiency and removing paper in the communication

and work processes of organizations. (Bahrampour, 1382.) All the activities were carried out in order to develop and facilitate the possibility of sharing information, and the people who were technology developers or users did their activities based on information. Some experts have been entitled Information as the commodity of the 20th century, and it is the orientation of all technological planning, inventions and products. According to what was mentioned above, this research is going to study the principles and foundations of virtual architecture and the age of information architecture.

Cybernetics and the Virtual world

Virtual architecture has a special position in the development of education, entertainment and commercial industries. Virtual architecture can contribute to fields in which electronics play a fundamental role, and also expert software and modeling of a building in a virtual environment have provided the possibility of scientific analysis before building construction. But important issue theorists think about is cyberspace, which can create a new space and time concept in the routine life of the people in the world.

If we want to study the relationship between architecture and computers, it is divided into some stages; the first stage is contention with digital technology affected by cyber bank and deconstruction (kandoogaran). The second stage was the face impact of digital technology, but the third stage was formed by a new generation of architects educated in a completely digital system (Belousova, N. A., et. al., 2020; Glebova, I. S., et. al., 2020; Zahra, N. A. I., et. al., 2019). This era can be named the era of the scientific effect of computers on architecture. This generation of computer architects is supposed to be inevitable. According to them, the computer is not a new technology that is considered special or deconstructive. They are trying to make all aspects of daily human life possible through technology, so what these architects require is correct and flexible architectural proportions. Working with these architects shows that they provide new scientific, applicable strategies with architecture, which are beyond the traditional relationships of architect/employer/ constructor, with architectural experiences that are more motivational and strategic. The building plan is observed by smaller lenses in their work, which can be expanded and developed over time. The most important issue is not to achieve new forms but to achieve new frameworks of working from these mostly young architects' point of view (Poster, 1998).

The three areas that changed the virtual reality of architecture are such that the development of information and communication technology has affected the function and process of architectural action directly. The creation of transformed perceptual spaces, which are the result of new perceptual-empirical areas, has provided the possibility of transformed imaginations. The design of cyberspace itself was created by the interaction between architecture and virtual reality technology.

Virtual architecture can be considered as an approach to visualizing and realizing formative architecture based on virtual reality technology. Virtual architecture is a foundation to merge visualization and design with the assistance of virtual reality technology in order to reduce the limitations of the environment and

common methods for architectural design. From virtual reality technology's point of view, it tries to enable a range of providing presentation techniques on stage to supply a kind of revolutionary media for architectural design by becoming a transparent and communicative media. If we consider the invention of perspective in the revolutionary optical renaissance as an evolution in architecture, simulation technology in the 1980s and virtual reality in the 1990s can be considered a jump which is a turning point in using tools and its dominance. This opinion showed the emergence of new opportunities and concepts (Neufert, 2000). At least this technology is as important as the invention of the telephone, television and the automobile. Virtual reality technology will also become a routine necessity after a short time. The beginning of this transformation is hip and thigh change which has taken place in communication through virtual reality technology. Virtual technology can establish such real communication in which no face-to-face communication is required. Therefore, trips around the world will be reduced and using fossil fuels will be avoided. Environmental risks are reduced, and international trade is facilitated.

Theoreticians of Information Society

Although numerous theoreticians have expressed their opinions about information society directly or indirectly, some of them have had more formal opinions; we have reviewed the most famous ones briefly in this section.

Daniel Bell - Professor Bell (1919) is a famous and experienced American sociologist among those who support the idea of appearing a new type of society, which is called an information society. He has provided the most well-known description of the information society through the theory of post-industrialism. Bell believes that the concept of post-industrial society (PIS) is only available at an abstract level. He published the theory of PIS in 1973. Daniel Bell believes that the United States leads the world in a way that directs to a new kind of system. Nonetheless, he does not claim that the development and establishment of PIS is an inevitable result of history. He believes that it is possible to trace the movement path of pre-industrial societies toward industrial and then post-industrial. According to Bell, PIS emerges from changes in social structure and not cultural or political ones.

Anthony Giddens is the most important theoretician after the war in the UK and the pioneer of establishing outstanding indigenous sociology in it. Giddens wishes to reframe social theory and revise our understanding of the development and the path of modernism. Giddens states directly that "It is generally said that we are only now in information age at the end of 20th century, but modern societies have been information societies since the beginning of their emergence." He shows us that increasing the importance of information has a deep historical background through this comment. As deep as convinces us that today information has significant importance, in what era he calls modernity at a high level. But this is not enough to accept a kind of system change that Daniel Bell describes as post-industrial society. (Taem, 2000).

Herbert I. Schiller (1919) is the most outstanding member of a group of critical theorists who explicates the current process in the field of information. He is an

American intellectual born in New York and has certain modifying views. In fact, Schiller is an economist who focuses on political economy, and his analyses and views have Marxist bases. He emphasizes that we live in an era in which producing and broadcasting information has become a necessary and unavoidable activity in the whole system by any criteria. Also, he believes that information and communication are basic elements of normal and accepted attempts of Capitalism. First, he pays attention to the discussion of the relationship between commercial standards and information developments. For Professor Schiller, the centrality of market principles as a powerful constraint in the commodification of information and in the concept of increasing access to information is only under the condition of salability. Today, information is traded as a commodity.

Age of Information Architecture

1-Reflection on Virtual Architecture

Cyberspace is in common with the architectural space in both cases, and its major effects on current world architecture cannot be ignored, either as a solution space or as a problem space. The world of data is connected to the area of architectural solution as a tool, colleague and shared space, and on the other hand, as a problem, brings us thoughts about how this spatial field is. To know where and how this space is formed? What are its constructive factors? And who designs it?

In this position, all design producers of cyberspace should be considered like any other space which is designed and constructed in the real world. One of these producers, which is common in both fields (solution and problem) and is a part of current world architecture, is designing based on parameters. Parameters have affected many real and virtual design issues, and maybe it can be said that they have simplified them. This (architecture based on parameters) has become more visible by the presence of cyberspace in the field of architecture and has been discussed in architectural societies. Therefore, by a problem-oriented view of cyberspace and its brief introduction, parameter and design have been described based on that, which can be considered not only as a design problem but also as a solution (Joy, 2002).

If architecture is defined in functional and aesthetic relationships between real activities and their appropriate bodies, then information architecture is also defined in relationships between three spatial environments of the mental world, real world, and network. Information architecture gathers these three environments and defines the relationships between them. Today, we observe the establishment of a new field that has not existed before. This new spatial domain, which is directly connected to the Internet and the World Wide Web, allows us to review the relationship between spaces that we have been accustomed to for a long time, which are real spaces and mental spaces.

If we accept that information architecture is the simultaneous management of physical, mental and virtual space, we should know where and how these spaces encounter and interact with each other. If the problem of information architecture

was only the software used by the computer, the only simple task was judging whether the program was suitable for the intended purpose. But information architecture deals with a complex spatial structure, which has become unavoidable in the contemporary era. The current problem is to think about how this space is, and it cannot be said that it is the duty of an architect or information processing expert, but undoubtedly, architects can play an important role in creating a new space for humans located at the contact point of three spatial environments (Robertson, 2001).

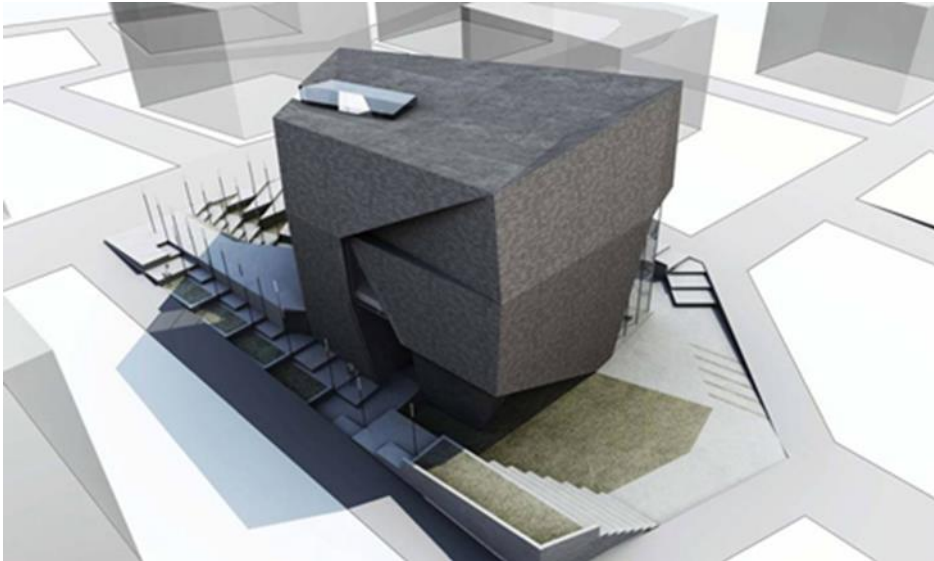


Figure 1: the architecture of management information

2- Principles of Virtual Architecture

Principles of Materiality and Reality

The principle of materiality emphasizes the value of allowed firming in reality and that there is no type of virtual space without being supported scientifically, especially in cases in which communities and services are concerned; the virtualization of many human activities creates a kind of being independent of establishing them in reality. While in connection, along with face-to-face interaction, senses in the body with the brain have the highest ability to process information (Razavizadeh, 2003).



Figure 2. Virtual architecture

Every action performed by a network leads to the construction of a society, a society in the present moment, which does not necessarily mean that it is less durable than real societies, but the quality and durability of a project which creates this type of society depends on establishing based on activity. Finally, four basic elements of a network can be expressed as follows: materiality, cohesion, speed and control.

Efficiency

The feature of efficiency in architectural spaces is one of the inherent requirements of architectural creation. Virtual spaces also should be useful and motivational as physical spaces. This principle establishes a set of rules for network space, combining maximum speed with maximum accuracies like the human brain, reliability and the mental easiness of working with them. For a useful object in a connected architecture, which is made of information, the ability to store, restore, search, analyze, update, the ability to correct, etc., is necessary (Reo, 1998).

Simplicity

It is a simpler language that uses fewer primitive elements to achieve a determined ability. Sometimes simplicity is misunderstood with easy to understand. Simplicity is another characteristic of virtual spaces which can be measured according to the above explanation. On the other hand, the space of networks should be able to be developed and updated. It does not necessarily mean that they are modular (repeatable). It should also be resistant to early technological outdateding and death. Bamrazli Group, the professor of virtual architecture, suggests four principles that maybe been chosen as Vitruvius's equivalent to his beauty principle if he were alive: simplicity, modularity (repeatability), tolerance and decentralization, simplicity including user-friendliness and also being social is possible.

Opinions of Architects

We are going to mention some of the opinions of architects about architecture in the following.

Peter Eisenman

"Modernists claim that utopia should be sought in the future, and postmodernists are also looking for utopia in the past, but architecture should find this utopia in today's conditions. In this case, a word meaning present time is used, and he believes that architecture should be in the present time at any time and place and belong to the present time and place. The past rules of architecture should be broken in order to achieve the above conditions, and since these rules are neither conventional nor natural, therefore, the truths and symbols of the past should be opened and new concepts extracted according to today's conditions in order to break them. Peter Eisenman believes that there is duality, such as clarity and ambiguity, ugliness and beauty, stability and instability, design and [amphibology](#) in our life. These dualities should be shown in the construction of architecture as a manifestation of today's living conditions. Today's architecture should reflect today's mental and biological conditions, and what is ignored in today's architecture is a part of our today's life."

Arata Isozaki

"The complexity, plurality and independent identity of elements are discussed currently, and this point is apparently higher than the eliminating and summarizing the topic. The complexity should be so great that the spatial understanding and personal perceptions flow as infinite metaphors. One of the valuations of Charles Jencks is the same issue, and because of it, he contradicts some works of modern architecture due to the creativity of the geometry and platonic shape of the space, which can be understood at a glance. Here, architecture is like an abstract painting that has wide perceptual horizons in its heart and soul and creates far and near similes side by side, which is beyond the designer's opinion. What critics do..." (Saeidi, 2004)

Richard Meier

"Architecture has a great position today. There are extraordinary amounts of innovations and creativities, as well as redounding to search for clarity and transparency, these days. This is not just observed in the USA, but all over the world. Communication has become faster than ever, and this has actually created a kind of awareness and thinking in architects all over the world. Meanwhile, searching for what has meaning and what is suitable for a place, and the most straightforward, the simplest way of expressing architectural ideas can be seen." (Kashanijou, 2001).

Philip Jodidio

"The lack of an obvious style in Jean Nouvel's work, or his intention to change his approach in each new project, shows a fundamental method in the actual current

procedure in contemporary architecture. The only true style is being styleless, architects have completely understood the ascendancy of early modernism, and they have reached beyond new territories; for example, computer design is one of them. Architects such as Rafael Moneo from Spain, Álvaro Siza Vieira from Portugal, and Tadao Ando from Japan have adjusted the precepts of modern architecture to their countries. There is no need to forget these precepts; architecture is alive today; it welcomes diversity and rejects trivial and easy classification" (Forghani, 2003).

Charles Jencks

The future architecture will not be linear. We will no longer be able to understand it through a one-dimensional, single-course science. The disciplined reasoning process will be replaced by a more comprehensive totality, and it is the plurality and complexity of new sciences along with intuitional wisdom. The architecture of the third millennium will be a pluralistic, varying architecture with the coexistence of all the conceptual elements of human civilization and the combined elements forming the architecture, which will be composed of light and transparent materials and shells, in which the outer and inner boundaries are blurred, and nature will not completely penetrate inside both visually and realistically (Sadr, 2003).

Deleuze's Thoughts and Formation of Virtual Architecture

Deleuze propounds a new concept of being a woman as opposed to philosophers like Nietzsche and Foucault. It is wondering that a great philosopher like Nietzsche, whose most important achievement is to consider beauty as an aesthetic phenomenon, denies the goddess of beauty, which is "woman" (beings imprisoned in the prison of rationalism: negro, slave, demented, and woman) and despised them and this may be considered the biggest contradiction among Nietzsche's thoughts. Metaphor and equivocation in Nietzsche's texts are also one of the characteristics assigned to women's conversations, which is opposed to a regular text with unified meaning, a male-oriented who does not change his word! But Deleuze, who is influenced by Nietzsche's thoughts in many cases, proposes a transformed concept of "femininity." Before Deleuze, the centrality was propounded, the tree of typing, a huge stick whose stems, leaves, etc., belong to it. Western thoughts have been dominated by a tree-like pattern for many centuries, which Deleuze and Guthrie have discussed in detail in their book "Thousand Levels" and offered criticism. This tree-like thinking has been influential in all fields of study, including botany, biology, anatomy, theology, epistemology, etc. Although architecture is not mentioned in these sciences, architecture is certainly not an exception to this rule, and the tree-like system is not limited to humanities and has dominated all the elements of human life for a long time. Also, masculinity is a kind of vertical thinking. A kind of thinking which is opposed to socialization. And Deleuze divides human desires into two types paranoia and Schizophrenia (Ka'un, 2003).

Paranoid desire has social and historical roots and is produced by a tree-like system. Norms and rules completely control humans and always suppress them. In this system, humans have fallen into a river in which they do not determine

the direction of movement, and they have to move in the direction of this river. Society imposes the path that humans have to follow. The patriarchal system, whose foundations have been weakening after years, and Schizophrenia's desires are gradually beginning and finding their position. Schizophrenia desire is actually the original and valuable aspect of human desire. A desire which is opposed to society, history, etc., is revolutionary and breaks the norm. Perhaps this sentence of Samuel Smith is an appropriate explanation of Schizophrenia desire: "swimming opposed to river flow needs strength and courage; otherwise any dead fish can swim in river flow" this statement is considered Schizophrenia desire valuable and original (power and bravery), and despises paranoid desire (dead fish). Humans must live in a closed system of society (in fact, they must swim in the river), but a schizophrenic mentality provides a stream against this system. Schizophrenia desire stands against the patriarchal system, making a desire free that has been controlled for a long time, not a revealed complex whose nature appeared. Society is afraid of a person who controls his/ her own desires. Therefore, society controls and limits desires and strongly tries to govern the person in its intended direction (Sadr, 2012).

According to Deleuze and Guthrie, imitation, socialization or being under control and authority, considering similarity as an important factor, being afraid of differentiation, or being controlled by a father or a ruler, is actually a kind of copying or transcribing, which has no value inherently, and should be mentioned that desire is always active, it is always formed of different components depending on its situation, and it is more like a machine. This rebellion and [disobedience](#) are observed in the works of deconstruction architects, and they get rid of the domination of history, society, etc. sometimes, even these works take their names from this genre, like the Folies (madness) Parc de la Villette, this madness implies the concept of rebellion. Perhaps, in the study of the evolution of architecture, deconstruction can be seen as the beginning of escaping from a tree-like system, which even leaves the author (architect) behind and states the theory of the death of the author, and the reader (or spectator) will interpret independently. A theory that has risen to its peak today in discussing virtualization and virtual architecture. A kind of architecture that is well explained by the horizontal thought of contemporary philosophers is the result of the age of communication. But the horizontal thought that Nietzsche promoted and Deleuze explained introduces a female perspective. Femininity seeks production, birth, and "being a woman" and does not intend to prove anything; as opposed to masculinity which is a form of being and intend to be the main center, femininity escapes from being. Masculinity is unitarist, like a tree, and proud of himself because of it, but femininity escapes from being and searches for different beings...in fact, femininity is pluralistic, like a rhizome, and this thought removes masculinity from the center. In fact, femininity is the promotion of horizontalism and leads to living happily." Finally, becoming a woman means living in a different way, and philosophy should take advantage of the possibility of becoming a woman to reach other areas of thinking." (Amami, 2001).

Rhizome results in birth, as the concept of femininity also indicates it. The rhizome is the rootstock (hypogeal stem) of some plants, which is the factor of their reproduction, and it grows horizontally and creates new parts frequently (following different beings). Even if the rhizome is cut, it does not die, but several

plants grow from it. The rhizome is the opposite of the tree-like system and is numerous inherently. Unlike a tree that depends on a huge stem, the rhizome has gotten rid of the constraints of unity and is reproducing and creating connections rapidly. Normal trees consist of the main trunk and several stems, and numerous sticks and leaves. In other words, each of them originates from an original unity or oneness. The source of this type of thinking originates from Plato. Plato's vertical tree-like philosophy represents the material world and imitations and surfaces, which are the stems of a trunk, which is the world of examples or the world of ideas. But Deleuze is one of those who attempted a lot for anti-Platonism. He says: "The mission of modern philosophy is to reverse Platonism." Deleuze is a philosopher whose effect can be observed in establishing architectures such as folding, cyberspace, hyperspace and virtual architecture, and his proposed horizontal thought indicated a new way for architects. The term rhizome proposed by Deleuze reminds us of horizontal thought. (Kashanijou, 2001). The rhizome is from the Greek root, Rhiza, which means the root and underground stem of some plants, which have nodes on its top and its roots are grown willingly under it. According to Deleuze, a rootless plant has no structure that relies on the foundation, which lives "illogically," and its becoming is not following any specific law and rule. As mentioned, the rhizome has unique features which are very interesting, as well as its illogical life. This illogicality is a kind of [equivocation](#), in our opinion, and in fact, it is better to say that the rhizome has a logic that is not easily understood. Such as no rule, pattern or logic is found for the shape of snowflakes, it doesn't mean that we consider the creation of snowflakes with no logic, but we will have to confirm the weakness of our information and knowledge and confess that we cannot understand its logic! (Casteels, 2001).

Jean Baudrillard, the contemporary French philosopher, says: "instantly, all real thought disappears, and it is allowed to be replaced." The method of virtualization, both in science and especially in architectural computer programs, is one of the most important scientific achievements which can be understood and explained by Deleuze and Gutari's ideas. Understanding contemporary European architecture doesn't have any result without thinking about the thoughts of contemporary philosophers. Because the majority of artists, especially prominent European architects, somehow owed to the thought of philosophers such as Jean-François Lyotard, Jacques Derrida, Jean Baudrillard, Gilles Deleuze, etc. It should be mentioned that virtualization, which is the result of the new electronic revolution, is somehow owed to the ideas of these elders. This revolution has made us move from reality to virtuality, which means achieving a state in which time and space are merged. Richard Rogers stated in the explanation of single architecture about 30 years that: "In the modern era, should live in modern buildings." But today, we are on the threshold of the fourth wave while passing through the industrial age. The age is called the information age, and if by following Rogers' statement, we say we should live in smart buildings in the information age (in an electronic age, we should live in digital buildings - in the computer age, we should live in virtual buildings!!!) We have not said anything nonsense. However, it should be said that "virtualization" is inevitable in our era, and this wave has affected all sciences and fields, and architecture has not been an exception to this rule. Terms such as fluid architecture, meta-morph architecture, unstable architecture, evolutionary architecture, cyber architecture and cyberspace, which can all be considered the sub-categories of virtual

architecture (Mohammadi Asl, 2003), are the results of this age. Thought has virtual nature, and action has a real nature. Therefore, virtual architecture takes place between "fact and virtue." For a while ago, these two categories apparently were in two opposite areas, but after the emergence of "virtual reality" discussion, architecture and information technology were combined and will progress to the point in which human beings will live in an artificial environment which will be a transformation of the space of existence and [biologic](#) by the integration of architecture and information technology. The definition of virtual reality in the Oxford dictionary is something non-formal, non-practical, but something that exists really or practically. Virtual reality can be seen as the developed tool and idea of expressing the architectural space. Virtual reality was introduced in the mid-1980s. A space that a viewer perceives and thinks is real, while it is a space that was created by a computer and has no real existence, and it is a virtual issue that has been considered real. Sherman and Judkins offered features for virtual reality, and their generalization in the field of architecture are:

- 1) This system has the ability to adapt and centralize all information related to architectural space;
- 2) conditions are provided for the user of the system to be able to trade in an intelligent manner, and the working area can be verified in a reciprocating process;
- 3) It can include and affect all conceivable aspects of the system for a user;
- 4) It has an ability to show all information and complexities which every human product is looking for;
- 5) It created an immediate, direct and unmediated space of feeling and perception, which are the components of architectural space perception.

Virtual reality is a reality that has the effect of real reality but doesn't have its original form. It is a kind of simulation or alternative, but it has ability and accuracy. It is close to reality and practically considered real according to its effect on people. Virtual reality tries to create new environments, which are imaginary, imaginary areas that seem "real" in unique ways but are not directly connected to the world as we understand it. But virtual architecture is formed by being affected by virtual reality, and in fact, it is between us and the physical environment around us and almost completely covers and hides the real architecture behind us (Wester, 2012).

A user is involved in cyberspace while experiencing it, and all considered functions are transferred to the audience while this involvement or vice versa, audiences influence the functions of space and causes evolution. Showing time and its influence on creating space are among the features which have very important roles in designing cyberspaces. Features that are a blur in real architecture. Being dynamic and active are also features that affect the function and form of a virtual space. The user is not in a static, meaningless space that only performs certain actions, and their results are already known. Rather, on the contrary, by experiencing cyberspace, the user faces a phenomenon that is

constantly changing due to various reasons, and of course, he himself is also effective and active in these changes. In this type of architecture, the space changes over time and progresses to evolve. Since architecture has always satisfied the needs raised, now in the electronic age, we should design spaces that are raised in the digital field. Marcos Novak defined cyberspace as a space in which space and time are merged. Architecture can change form based on space and time, and here, movement is a necessary factor to change the composition of architecture in transforming spaces. This transformation can be achieved both in form and function; it can change based on situation and conditions and adapt to the demands of the audience. Virtual architecture is not a question that architecture and architects can answer and be satisfied by. Rather, it is a condition which we want to live according to at the end of the 20th century through physical, sensory and stimulation encounters with computers.

Conclusion

Cyber architecture is an architecture without limitations; this architecture doesn't have the limitations of a site in which an architect is involved within the execution plans, and an architect can design on a site with unlimited scope, and Novak proposed the second possibility in fluid architecture which is freedom from the gravity of the earth, and These features made Professor Tanaka choose the name "Impossible Architecture" for it. In an exhibition held in 1997 named Virtual Architecture at the University of Tokyo, Greg Lynn gave a speech rejecting the Cartesian system of space design which is obvious in the field of cyber, because Euclidean geometry and Cartesian system are not responsible for the freedoms of cyberspace. In terms of form, the complexity is also evident in cyberspaces because the tools are also provided, and the ideas tend to be more complex because of the lack of restrictions on site, structure and the Earth's gravity, etc. tends toward complexity and course, this complexity can also be seen in the field of constructed buildings and executive plans after the emergence of deconstruction architecture. William J. Michael points out: Electronic spaces apparently deny any kind of geometric form. Professor Tajima called this idea "virtual baroque," which expresses the complexity of forms and their expressionistic expression.

Just as virtualization is a gift and inevitable in our era, the role and importance of cyberspace in the production and continuity of a virtual network in the fourth age are determined again by considering the concept of virtualization, its effects by Deleuze's thoughts and introduction Internet as the most influential phenomenon of the present age. An issue that is proposed as the concept of femininity in Deleuze's thoughts is opposite to the tree-like systems, as virtualization will also propose a new definition of architecture. Virtual architecture is an evolving branch that is made by converging information mapping, information simulation, digital forming, information architecture, etc. And we should accept that as an architect; we should react to these phenomena by applying all the new geometric rules and providing "beyond perspective geometry" and provide a kind of architecture that is valuable in the third millennium and information age, an architecture that is not intended to prove itself and to be an example of a verb but also is seeking for different becomings, like the theme of Deleuze's femininity.

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